

Date: 21st September 2020

By email only: info@londonresortcompany.co.uk



Dear Madam/Sir,

RE: The London Resort Statutory Consultation

This letter is written in response to the London Resort Statutory Consultation which runs from 27th July – 21st September. Kent Wildlife Trusts remit includes impacts to biodiversity. We have reviewed relevant chapters and appendices within the PEIR against national and local legislation and policy, which in the absence of a National Policy Statement (NPS) for commercial and business NSIPs, includes the National Planning Policy Framework (NPPF) and the National Networks NPS. A summary of our concerns and our position are described in the box below with more detailed comments in the main body of the letter.

Summary

Kent Wildlife Trust has the following concerns on the basis of the information submitted in the PEIR:

- The mitigation hierarchy has not been applied when proposing mitigation throughout the PEIR.
- The importance of the proposed development site as functionally linked land to Internationally designated sites has not been properly assessed, being described as only significant at district level. Further information is required to properly determine impacts and to develop a suitable mitigation strategy.
- The impacts of disturbance and habitat loss on qualifying features of the Swanscombe Marine Conservation Zone have not been properly assessed nor mitigated.
- An updated assessment of impacts to Botany Marsh Local Wildlife Site (LWS) is required to establish the impact from noise, lighting and recreational disturbance as well as changes to the water tables which may impact species which rely on the ditch system. It is likely that a buffer zone is required to safeguard functionally important wetland habitat and reduce disturbance.
- We are concerned that the PEIR has significantly under represented the area on site classified as Open Mosaic Habitat on Previously Developed Land (OMHPDL). This is in contradiction of the OMHPDL priority habitat inventory and the criteria for classification as OMHPDL priority habitat.
- We are extremely concerned about the loss of large areas of this Nationally important site for invertebrates. The large and diverse species assemblage makes this one of, if not the most, important brownfield site in the UK and it must be protected and enhanced accordingly.
- We are concerned that the Defra Biodiversity Metric 2.0 calculations significantly underestimates the current level of biodiversity on site, and that proposed habitat creation and enhancement measures will not be nearly adequate to compensate for this loss, let alone meet the applicant's commitment to achieving biodiversity net gain.
- It is concerning that the assessment of sites in Appendix 4.1 does not seem to have been updated since 2014. Further, we do not believe that the assessment of the Swanscombe site is accurate with regards to the criteria of "land use" and "environmental constraints" and therefore this assessment is not in accordance with national policy and legislation.

In addition to these issues, we also raise concerns regarding impacts to Sites of Special Scientific Interest (SSSIs), other LWS issues, ancient woodland, loss of wetland habitats and protected and priority species.

Due to the multitude of impacts to the environment, we trust that the current proposals will be significantly amended to comply with relevant policy and legislation. In the event that the necessary amendments are not made, the Kent Wildlife Trust would most likely formally object to the DCO submission based on the concerns detailed in this letter.



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National Policy

We wish to bring to your attention the lack of reference to the Government's 25 Year Plan for the Environment in the consultation documents. Of particular consideration to this proposal are the government's targets for (underlining is our own):

- Creating or restoring 500,000 hectares of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits.
- Reversing the loss of marine biodiversity and, where practicable, restoring it.
- Taking action to recover threatened, iconic or economically important species of animals, plants and fungi, and where possible to prevent human induced extinction or loss of known threatened species in England.
- Embed an 'environmental net gain' principle for development, including housing and infrastructure.

In our opinion, this proposal does not commit to supporting the Government's aspirations for the environment due to loss of large areas of priority habitat, negative impacts to Swanscombe MCZ, the loss of a Nationally important brownfield invertebrate site, loss of habitat supporting protected and priority species, and resultant net losses of biodiversity as a result of the scheme.

European designated sites.

It is understood that there are four statutory designations of international importance within 15km of the Project Site which were considered for pathways of impacts:

- Thames Estuary and Marshes Special Protection Area (SPA)/Ramsar
- Medway Estuary and Marshes SPA/Ramsar
- North Downs Woodlands Special area of Conservation (SAC)
- Peters Pit SAC

Thames Estuary and Marshes SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar

Thames Estuary and Marshes SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar have correctly been scoped in for further assessment due to likely impacts to functionally linked land. The PEIR has identified that a large proportion of the peninsula is designated as functionally linked land and is protected at international level. This land provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status and these effects must be considered via a Habitats Regulations Assessment.

There is not yet enough information to fully establish impacts to functionally linked land or ascertain the suitability of proposed mitigation. In order to assist consultees in understanding the likely impacts the following should be provided:

- An assessment of the noise modelling presented in Appendix 15.1 should be used to predict the likely impacts of both construction and operation of the of the scheme on specific ecological receptors. There is a body of evidence available for assessing impacts of noise of birds.
- Modelling of light spill during both construction and operation. It is noted that this is proposed to be submitted at the DCO stage, however this will not allow sufficient input from consultees at this early stage. The lighting assessment should focus on key ecological receptors.
- Assessment of water level and quality changes post development and the impacts of these on qualifying bird species.
- Mapping of both breeding and wintering bird survey results to visually demonstrate where qualifying features of the SPAs have been recorded. It would be useful if this also represented survey results from previous years.
- Clear justification of which qualifying features are functionally linked to which designated site.
- On the basis of the above, a detailed plan of mitigation measures following the mitigation hierarchy.

Kent Wildlife Trust does not agree with the assessment within *Table 12.5: Ecology Impact Assessment Summary* which states that the direct loss of functionally linked land as a result of construction activities is only significant at the district level. Functionally linked land is given the same protection as internationally designated sites and the significance should be updated to reflect this. The same should be applied to the impact of visual and aural disturbance.

The PEIR states that the “*potential effects of the proposed development on the IEFs [...] during the operational phase could include increased lighting, noise and traffic leading to disturbance of species within retained and newly created habitats*”. However, the assessment of operational impacts within Table 12.5 does not present an accurate reflection of impacts to functionally linked land. The existing saltmarsh, and proposed creation of salt marsh are likely to be impacted by visual, aural and lighting disturbance from the ferry port and entrance to the park. Further, Kent Wildlife Trust are concerned about the impacts of lighting and noise on Botany Marsh and Blackduck Marsh, both of which lie directly adjacent to the proposed theme park footprint and associated infrastructure. These impacts should be assessed using a detailed lighting assessment and noise assessment for ecological receptors and impacts should be avoided through redesigning the resort to create significant and suitable buffer zones.

It is also concerning that paragraph 12.168 acknowledges that despite future updates to the ecological mitigation and enhancement strategy it is predicted that significant negative residual effects will remain, including “*the wintering waterfowl and wading bird assemblage, wintering terrestrial bird assemblage, breeding bird assemblage*” (i.e. including impacts to qualifying features of SPAs). In line with the mitigation hierarchy these impacts should only be subject to offsite compensation as a last resort with avoidance being the priority. Ecological and environmental constraints and reports should inform the evolution of site selection and scheme design. Compensation should not be used as a tool to justify a predetermined design.

North Downs SAC and Peters Pit SAC

The applicant states that North Downs SAC and Peters Pit SAC have been screened out on the basis of previous conversations with Natural England. Transport infrastructure for this scheme is likely to increase levels of air pollution, providing a potential pathway for impact to both SACs through the exceedance of critical values for air pollutants. Supplementary advice for Peters Pit SAC states that “*The supporting habitat type is considered sensitive to changes in air quality. Exceedance of critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and reducing supporting habitat quality and population viability of this feature.*” Further, supplementary advice for the North Downs Woodland SAC states “*This habitat type is considered sensitive to changes in air quality. Exceedance of these critical values for air pollutants may modify the chemical status of its substrate, accelerating or damaging plant growth, altering its vegetation structure and composition and causing the loss of sensitive typical species associated with it.*” On this basis, we advise that these impact pathways are further explored and that Natural England be re-consulted, particularly given heightened focus on associated transport infrastructure.

Marine Conservation Zone

The proposal is likely to cause both direct and indirect impacts to the Swanscombe Marine Conservation Zone (MCZ). Under the Marine and Coastal Access Act 2009, the Swanscombe MCZ was designated in 2019 for the presence of intertidal mud habitat and the nationally scarce tentacle lagoon worm (*Alkmaria romijni*). Intertidal mud is a highly productive ecosystem, supporting both the tentacle lagoon worm and wading and migratory birds.

It is understood that the proposals include the creation of two ferry terminals west of the peninsula, including a floating platform and jetty, renovation of Bell Wharf and a Ro-Ro facility. In addition, flood defence and drainage works are proposed at the Kent Project site. At the Essex site it is understood that there will be works to the jetty and pontoon at the Port of Tilbury which will require piling. It is understood that dredging is not proposed.

Due to the sensitive location of the proposed works, it is highly likely that Swanscombe MCZ will be negatively impacted. The location of the ferry terminal and jetty are situated within areas of intertidal mud with known records of tentacle lagoon worm, as per the MCZ designation. It is therefore concerning that paragraph 13.84 of the PEIR states that whilst the tentacle lagoon worm is likely to be disturbed, displaced or killed, these impacts are dismissed. The tentacle lagoon worm is highly vulnerable to habitat changes. It is known to be negatively impacted by disturbance of sediment, with instances where numbers never returned to pre-disturbance levels. Further, it is concerning that, as per the summary table, the applicant is disregarding the impact of habitat loss as a result of ferry port construction, impacts from water quality and disturbance on MCZ features. Further, we would query why the MCZ is not considered to be at risk from impacts from the spread of invasive non-native species, indirect effects via the food chain and accidental pollution events. This query is supported by the fact that when assessed separately within the summary table, intertidal habitats (a feature of the MCZ) are assessed for these impacts.

The assessment of the MCZ appears to disregard the purpose of its designation to maintain intertidal habitat and tentacle lagoon worm features in favourable condition. We suggest that the applicant seeks advice from Natural England on the assessment of impacts and how to properly apply the mitigation hierarchy.

Sites of Special Scientific Interest (SSSIs)

Baker's Hole SSSI and Swanscombe Skull Site SSSI are designated for their geological interest and are outside the scope of Kent Wildlife Trust's comments. An absence of comments from KWT does not imply that the proposals are suitable with respect to these SSSIs.

Impacts to the Medway Estuary and Marshes SSSI and the South Thames Estuary and Marshes SSSI are broadly covered in our comments relating to the SPA and Ramsar sites. Further, on a number of occasions, the PEIR erroneously refers to the Inner Thames Marshes SSSI as Rainham Marshes SSSI.

A construction environment management plan is required to ensure that Darenth Woods SSSI will not be indirectly impacted by construction traffic through measures such as dust suppression, noise mitigation and light pollution mitigation. Further, operational impacts arising from air quality impacts should be assessed using an air quality assessment which accounts for increased Annual Average Daily Traffic (AADT).

West Thurrock Lagoon & Marshes SSSI is approximately 1 km from the Kent Project Site and is designated to protect wintering waders and wildfowl that use the intertidal mudflats. Impacts from the construction of the theme park, including lighting, noise disturbance (particularly short sharp loud noises from activities such as piling), impacts to water quality and disturbance from construction vessels must be accounted for. At present, the assessment for this site only refers to functionally linked land.

Local Wildlife Sites (LWSs)

The PEIR states that only four LWSs are scoped in for further assessment. It is acknowledged that a description of all LWSs is provided but no ecological justification is given for scoping out all but those within or adjacent to the DCO boundary. It should be assessed whether impacts will arise from associated transport infrastructure, from increased transport in the local area and air quality impacts (i.e. the exceedance of a sites critical load).

Of particular concern are impacts to Botany Marsh LWS, which supports species including otter, water vole, reptiles and both breeding and wintering birds. Botany Marsh LWS is recorded to be functionally linked to nearby European sites as a high tide roost for qualifying species such as shelduck, and other species which contribute to the designated non-breeding waterbird assemblages. The Red List species Nightingale and Starling were also recorded during the breeding bird survey at Botany Marsh LWS.

Paragraph 12.169 of the PEIR acknowledges the likely negative impacts from aural and visual disturbance to Botany Marsh LWS. We dispute that these impacts will be "minor negative" due to the fact that development is proposed directly adjacent to the LWS with no proposed buffer zone. Impacts arising from changes to the water table as a result of ditch habitat and increased hardstanding must also be considered. These residual

impacts must be reduced to an acceptable level with offsite compensation being a last resort in line with the mitigation hierarchy. It is likely that a suitable buffer zone will be required to mitigate impacts and therefore we advise on the retention and enhancement of Botany Marsh west to support and enhance the LWS.

We are also concerned about the impact of the loss of Floodplain Grazing Marsh and ditches in Botany Marsh west in terms of loss of habitat that is functionally linked to the LWS. We consider this in more detail in the section on priority habitats set out below.

Ancient Woodland

It is concerning that Chapter 12 of the PEIR does not properly make an assessment of impacts to ancient woodland. Table EDP 12.3 should also refer to “ancient semi-natural woodland” as opposed to solely “broadleaved semi-natural woodland”. This substitution is downplaying the value of ancient woodland sites such as The Thrift Wood and Parkhill Wood, both of which are designated as ancient woodland. We seek clarity as to whether the red line boundary extends into these areas of ancient woodland. Paragraph 175(c) of the National Planning Policy Framework states that “*development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists*”. Direct and indirect impacts to ancient woodland should be taken into account when determining the suitability of this proposal. Potential impacts may arise from air quality and dust as a result of increased construction traffic and operational traffic.

Priority Habitats

Open Mosaic Habitat on Previously Developed Land (OMHPDL):

We are concerned that the PEIR and phase 1 habitat maps attached in Appendix 12.1 significantly under represent the area onsite classified as Open Mosaic Habitat on Previously Developed Land (OMHPDL). We would draw your attention to the qualifying criteria for classification as OMHPDL priority habitat, which are stated as follows:

- *Be at least 0.25 hectares in size*
- *Known history of disturbance at the site or evidence that soil has been removed or severely modified by previous use(s) of the site. Extraneous materials/substrates such as industrial spoil may have been added.*
- *The site contains some vegetation. This will comprise early successional communities consisting mainly of stress tolerant species (e.g. indicative of low nutrient status or drought). Early successional communities are composed of a) annuals or b) mosses/liverworts or c) lichens or d) ruderals or e) inundation species or f) open grassland or g) flower-rich grassland or h) heathland.*
- *The site contains un-vegetated, loose bare substrate and pools may be present.*
- *The site shows spatial variation, forming a mosaic of one or more of the early successional communities plus bare substrate, within 0.25 ha.*

We are particularly concerned that a very narrow approach to defining OMHPDL has been adopted, particularly in the areas of habitat that will be directly lost in the northern part of the main theme park development. The OMHPDL priority habitat inventory identifies an area of 45ha of land covering a large part of the Swanscombe Peninsular, approximately 25ha of which will be directly lost to this development. However the phase 1 habitat maps only identifies as OMHPDL a section covering approximately 3ha within in the area identified in the PEIR as “*Main Access Track, Tunnel Section Storage and Adjacent Ephemeral Habitat*”.

It appears that the main criterion that has been used to define OMHPDL is the presence of large and obvious areas of bare substrate which are readily apparent in satellite imagery. We would draw your attention to the definition of bare substrate in the UKBAP Priority Habitat Description for OMHPDL:

“Bare substrate can occur at a range of spatial scales, from unvegetated patches easily seen from a distance, to small, open spaces between individual plants within a community. On some substrates, for example coal spoil, the patches of bare ground may be 10cm across or less. A site with a wide variety of patch sizes could also qualify”.

While we have not been able to survey the site in detail, we are of the opinion on the basis of a limited walk over visit and assessment of satellite imagery that this definition for presence of bare substrate would be applicable to a far wider range of habitats across the site. This would apply to most of the area identified as “Main Access Track, Tunnel Section Storage and Adjacent Ephemeral Habitat”, most of the area identified as “North East Tip”, the northern part of the area identified as “South West Tip” and southern parts the area identified as “Broadness Grassland”. The other 4 qualifying criteria outlined above are also clearly applicable to these areas.

We would also draw your attention to the following paragraph in the UKBAP Priority Habitat Description for OMHPDL:

“One of the principal reasons for the habitat being a priority is its importance for invertebrates. Many have very precise requirements for habitat ‘niches’ within their landscape. As well as areas of bare ground and food plants, these may be for sheltered places at various times of the year, or for rough vegetation or cover at others. At any particular site, features such as scrub may be essential to maintain the invertebrate value of the main habitat. Therefore, scattered scrub (up to 10–15% cover) may be present and adds to the conservation value of the site. Other communities or habitats might also be present (e.g. reed swamp, open water), but early successional communities should comprise the majority of the area”.

This highlights the importance of considering the core purpose of OMHPDL, namely its value as invertebrate habitat, and therefore highlighting that there is scope for including a far wider area within this habitat type than has been defined in the PEIR. The exceptional value of this site for invertebrates is clearly demonstrated in the PEIR and associated documents in Appendix 12.1, therefore we see no reason why wider sections of the site have not been classified accordingly.

The definition of OMHPDL clearly allows for inclusion of areas of grassland, wetland and scrub provided that these fit within a wider mosaic of other habitat components that are necessary support a significant invertebrate community. For this reason we are of the opinion that the priority habitat classification of OMHPDL should be extended to include at least the majority of the 25ha area that will be will be loss to development as described above.

This will have clear implications for the level of net biodiversity loss that will occur as a result of this development, with significant implications for habitat compensation required under paragraph 175 of the NPPF. These issues are discussed in greater detail below.

Coastal and Floodplain Grazing Marsh (CFGM)

As stated above in reference to Botany Marsh LWS, we are concerned about the loss of Botany Marsh west to development, which will consequently lead to the loss of a large section of priority Coastal and Floodplain Grazing Marsh habitat, likely causing severe detrimental impacts on connected habitat in Botany Marsh LWS to the immediate east. These impacts can be summarised in terms of:

- Loss of habitat for water voles, breeding habitat for red listed birds such as Mistle Thrush and Lapwing, and foraging habitat for bats, including the nationally scarce Nathusius pipistrelle. These impacts are dealt within in more detail in respective species specific sections below.
- We note that a rump area of approximately 1.65 ha CFGM will be retained in Botany Marsh east (LWS). CFGM habitat is usually found in large contiguous areas, which are classified for their value supporting wetland birds and ditch/open water species. It is difficult to see how this remaining area will be able to retain its value for wetland species once it has lost connection to the larger block of similar habitat to the west. This has implications for proposed habitat enhancement on this remaining area of habitat, which is discussed in more detail below.
- Impact on ditch system and water table. Habitats in Botany Marsh east and west are dependent on a shared ditch system. The loss of half of this ditch system is likely to have negative impacts on the

water dependent habitats of Botany Marsh LWS in terms of loss of overall habitat for a range of aquatic species and disruption to local hydrology.

We would recommend that further work is undertaken to assess these impacts and how they can be mitigated and compensated for. We are not convinced that sufficient work has been done to avoid loss of CFGM at the design stage, and thus be in full compliance with the mitigation hierarchy. We advocate for the retention of Botany Marsh west to mitigate for indirect impacts on the LWS and loss of priority habitats and species, as we have stated as our preference the section on LWS above.

Other Wetland Priority Habitats

We are concerned about the loss of priority wetland features within the developed area of the site, and the further indirect impact this may have on wetland features within the DCO boundary and adjacent to the developed area. We require confidence from the applicant that there will not be impacts to the water table as the result of the development as a whole. The section of the peninsula which is to be developed includes a series of ditches, standing water, reedbed and swamp. It seems likely that the conversion of these areas to hard standing will impact on water levels and water quality if adequate mitigation is not implemented. Further, it is not clear if the ditch system and associated wetland habitat which follows the existing footpath across the peninsula is to be lost as a result of development. Clarity is required and impacts must be assessed relating to the wider impact of loss of priority wetland habitats which support a variety of species including water vole, otter, breeding birds and wintering birds.

We would also like to see clarification about the status of the area referred to as “CTRL Wetlands”. We understand that this area represents previous compensation for loss of habitat as a result of construction of the Channel Tunnel Rail Link, therefore we would like to understand what this was originally compensating for (for instance is it for loss/impact on designated sites), the terms of any agreement and any wider implications this might have.

Species

Invertebrates

Invertebrate studies from 2012, 2015 and 2020 have highlighted that the Swanscombe Peninsula is of National importance for terrestrial invertebrates and of County and Regional importance for aquatic invertebrates. The site supports a huge diversity of species with over 250 terrestrial species being of conservation concern and 50 Red Data Book species. This assemblage includes the critically endangered distinguished jumping spider (*Attulus distinguendus*). Further, both the 2015 survey report and updated survey results clearly demonstrate that the value of Swanscombe Peninsula for terrestrial invertebrates exceeds many of the UKs SSSIs which are designated for their brownfield habitats and species assemblages. Kent Wildlife Trust are extremely concerned about the loss of key habitats which support this Nationally important assemblage and are not confident that proposed mitigation is suitable or sufficient. We have consulted with Buglife regarding this issue and on the basis of their expert knowledge of these species and habitats, we offer our full support to their more detailed comments on this matter.

Birds

In our comments above we have already discussed the importance of the proposed development site as functionally linked land supporting qualifying breeding and wintering birds of the Thames Estuary and Marshes SPA/Ramsar and Medway Estuary and Marshes SPA/Ramsar. It should be noted that the ‘breeding bird assemblage’ of breeding migratory waterfowl is a feature of the Medway Estuary and Marshes SPA. The presence of such species should be accounted for in the Habitats Regulations Assessment and subsequent mitigation, including the timing of proposed works. As per our previous comments, avoidance of impacts should be prioritised in line with the mitigation hierarchy.

Further, a detailed mitigation strategy should be drafted for further consultation which safeguards and enhances habitat for breeding and wintering birds, including red list species such as nightingale and linnet.

We refer you to more detailed comments made by the RSPB for a detailed discussion of ornithological issues, which we fully support.

Bats

In the absence of the emergence/re-entry surveys it is not yet possible to make a full assessment of impacts to bats. The importance of the site should be reviewed and updated following the results of emergence/re-entry surveys. We await these survey results ahead of the DCO submission, however we have made some initial comments below.

The peninsula is likely to be one of the few sites for bats in the local area that provides high quality foraging habitat. This is demonstrated by both the quantity of bats using the site, with over 21000 recordings in May alone, combined with the presence of nationally rare species such as barbastelle. It is noted that a large proportion of records of barbastelle to date were from automated detector 8 near to Blackduck Marsh. The Bat Conservation Trust information sheet on [barbastelle](#) states that *“Very few breeding sites are currently known in the UK and it is important that surrounding environments of these and winter hibernation sites are maintained. It is thought that they prefer pastoral landscapes with deciduous woodland, wet meadows and water bodies, such as woodland streams and rivers [...] Bats foraging over wet meadows mostly prey on micromoths, therefore measures to improve the quality of water meadows for the benefit of micromoths will provide better foraging opportunities for barbastelles.”* Barbastelle is a UK BAP species and is therefore a conservation priority on both a local and national scale. The loss of foraging habitat on the peninsula, including the loss of woodland to the south of Blackduck Marsh, combined with indirect impacts through increased noise and light at key foraging sites is likely to negatively impact this species. Compensation should be considered as a last resort with avoidance of impacts prioritised in line with the mitigation hierarchy. Without details of the location of proposed biodiversity offsetting it is not possible to determine impacts to the local bat populations and if offsetting will ensure that these populations continue to have access to sufficient foraging habitat.

Other rare species such as Nathusius' pipistrelle use a variety of habitats for foraging, including waterlogged areas and woodland edges. This is supported by their presence along the ditch corridor (automated detector 2 and 4), Botany marsh (detectors 5 and 6), Blackduck marsh (detector 8) and the small woodland area at detector 10. A large proportion of these key foraging sites are set to be lost under the current proposals.

The applicant should apply the mitigation hierarchy and prioritise the avoidance of these impacts through the retention of key foraging habitats and through the use of sensitive lighting schemes and noise mitigation.

Dormice

The results of the dormouse surveys indicate the presence of a population of dormice at Blackduck Marsh and along the 'transport corridor' to the south. It is concerning that the vast majority of suitable dormouse habitat on the peninsula will be lost as a result of the proposed theme park. Of additional concern is the loss of connectivity between the population along the 'transport corridor' and that at Blackduck Marsh. A detailed mitigation strategy, which employs the mitigation hierarchy, should be prepared and consulted on prior to DCO. This strategy should ensure that connectivity for dormice is maintained and enhanced both across the site and with the wider landscape. We would advise that any mitigation should take account of in-combination impacts of other development, including that at Ebbsfleet Central.

Water Vole and Otter

It is of great concern that despite both Botany Marsh east (LWS) and Botany Marsh west being shown to support a breeding population of water vole, Botany Marsh west is set to be lost to the development. 12.168 of the PEIR recognizes that significant residual negative effects remain for water vole. It is stated that *“Subject to further refinement of the off-site compensation land strategy, there is scope that many of these effects can be reduced to non-significant levels.”* The applicant's proposal to compensate for impacts via a biodiversity offsetting scheme are also highlighted in table 12.5. On this basis, the proposals do not appear to follow best practice with respect to water vole and otter and the mitigation hierarchy has not been implemented. The Water Vole Mitigation Handbook (2016)¹ states that the options to avoid impacts on

¹ <https://assets.sussexwildlifetrust.org.uk/water-vole-mitigation-guidance-2016.pdf>

water voles should be considered at the design stage. Such measures should include retaining watercourses/wetland habitats in their current location, protecting a buffer zone around the watercourse/wetland habitat and incorporating suitable habitat for water voles into the schemes design. It is clear from both the water vole survey results and other species surveys (including breeding and wintering birds surveys), and echoing our comments above relating to priority habitats, that Botany Marsh west provides important grazing marsh and ditch habitat for a range of species and should be protected and enhanced accordingly. In order to comply with the mitigation hierarchy described by the NPPF and best practice guidance, we urge the applicant to urgently reassess the current proposal for mitigation and compensation. In spite of plans to increase connectivity between Botany Marsh east and Blackduck Marsh, Kent Wildlife Trust will not support a mitigation strategy of this kind due to the loss of a substantial amount of suitable habitat for water vole and otter.

Connected to our previous statements above, the applicant should seek to increase opportunities for both species by both protecting and enhancing the entirety of Botany Marsh and increasing connectivity to Blackduck Marsh, taking account of likely disturbance in ditches adjacent to the theme park.

Reptiles

A reptile mitigation plan should be submitted for consultation prior to the DCO to allow consultees opportunity to advise on its suitability. The plan should seek to enhance reptile habitat and increase connectivity across the landscape.

Nationally Scarce Plants

It is noted that eight nationally scarce plants were recorded on the peninsula in 2020, with 13 recorded in 2016. Consequently, these populations result in Swanscombe peninsula being classified as nationally important for nationally scarce plant species. Of these species, it appears that areas of yellow vetchling, which is designated as vulnerable, and hairy vetchling will be lost as a result of the development of the theme park itself. We also have concerns about potential impacts from ditch profiling and habitat management to the north of Botany Marsh west. These activities should be planned and carried out in a manner that does not negatively impact nationally rare plant species or impact the status of the assemblage as nationally important.

A suitable, detailed mitigation and compensation strategy will be required to protect and enhance opportunities for this nationally important assemblage of plant species. Despite the fact that Man Orchid were not recorded during the 2020 surveys we would recommend that this be included in the mitigation plan on a precautionary basis, with updated surveys prior to development.

Biodiversity Metric Calculations and Compensation for Loss of Habitat

We are concerned that the Defra Biodiversity Metric 2.0 calculations attached as Appendix 12.3 significantly underestimate the current level of biodiversity on site, and that proposed habitat creation and enhancement measures will not be nearly adequate to compensate for this loss, let alone meet the applicant's commitment to achieving biodiversity net gain. This has significant implications for the ability of this application to be in compliance with relevant part of paragraphs 170 and 175 of the National Planning Policy Framework detailing the need to minimise impacts on and provide compensation for loss of biodiversity.

We are particularly concerned with the following aspects in the baseline assessment which we recommend should be reassessed and, if appropriate, amended:

Baseline Habitat Type and Distinctiveness

We are of the opinion that the calculations outlined in Appendix 12.3 significantly underrepresent the quantity of high distinctiveness priority habitat on site, particularly areas of Floodplain Wetland Mosaic and OMHPDL which will be lost within the footprint of the main theme park.

We note that much of Botany Marsh east and west is classified as low distinctiveness modified grassland in the calculations rather than as the more appropriate Floodplain Wetland Mosaic habitat type. In the Defra Metric Technical Supplement, criterion b for Floodplain Wetland Mosaic is given as:

Floodplain areas providing important refuges for wetland wildlife whose natural habitats have been lost including:

i. Land with breeding waders and/or wintering waterbirds, or other terrestrial wetland priority species or assemblages.

ii. Species currently dependent on ditches and other seasonal or permanent standing water within, or surrounding the land.

Based on evidence provided in the PEIR, which highlights the presence of wintering and breeding water birds and the presence of an important invertebrate assemblage and priority species such as water vole in the ditch system, we are of the opinion that this area clearly meets the criteria for classification as high distinctiveness Floodplain Wetland Mosaic habitat. This is underscored by the Phase 1 habitat survey undertaken in 2016 by Christopher Blanford Associates, which classified this area as Coastal and Floodplain Grazing Marsh Priority Habitat (the corresponding habitat to Floodplain Wetland Mosaic in the Phase 1 habitat classification system). Additionally, paragraph A1.54 of Appendix 12.1 Baseline Ecology Report states that *“it is likely that this area qualifies as the priority habitat ‘coastal/floodplain grazing marsh’*. Using this habitat classification and applying a moderate condition assessment would lead to the addition of 112.32 units to the overall baseline total.

As we noted previously, we are of the opinion that the extent of OMHPDL habitat on site has been significantly underestimated. We are unable to provide exact area estimates at present owing to lack of necessary information, but estimate that potentially at least 20 ha of OMHPDL has been wrongly classified as lower distinctiveness habitat. The reclassification of large areas of the site which are currently classified as moderate distinctiveness neutral grassland and mixed scrub to high distinctiveness OMHPDL would also lead to a significant increase in the number of biodiversity units in the baseline total, likely in the hundreds of units.

Baseline Condition

Much of the habitat across the site is classified as in poor or fairly poor condition. We are concerned that the condition assessment has not taken account of the condition criteria set out in the Defra Metric Technical Supplement and would request that a more comprehensive justification is given for applying these condition scores in a way that corresponds with relevant Defra guidance. We are also concerned that the assessment has also not taken account of finer grain variations of condition across the site and therefore that areas of habitat in better condition have not been adequately accounted for. We would recommend a finer grain assessment of habitat type and condition accompanied by a detailed report explaining how condition scores have been arrived at.

Given the lack of information at present we do not wish to go into detail about all areas where we suspect there are discrepancies in condition scores, but would point out two habitat types where underestimation of habitat condition appears most obvious:

Open Mosaic Habitat on Previously Developed Land: Appendix 12.3 classifies all OMHPDL as being in fairly poor condition. Condition assessment criteria for good condition for this habitat type are set out Defra Metric Technical Supplement are as follows:

Vegetation provides multiple opportunities for a high number of species to live and breed (complete their life cycles).

Bare open ground is common throughout the area.

Plant species are flowering extensively and so providing ready nectar sources for insects.

Insects and butterflies are common and using the site extensively.

None of the indicators of poor condition are present.

The invasive non-native species are low or absent from the site, or in the process of being eradicated if beneficial to wildlife to do so.

The comments on condition for the entry of OMHPDL in Appendix 12.3 state “*relatively botanically poor, lots of buddelia (sic), large areas of hard standing still intact in places*”. None of these points have any relevance to the condition criteria set out above (note that buddleia is not included on the list of undesirable species associated with this habitat type as set out in the Technical Supplement, and is likely to be beneficial in the context of providing invertebrate habitat). Of greater relevance is the importance of this habitat type for invertebrate communities. Given the exceptional and nationally important invertebrate communities that depend on OMHPDL across the proposed site it is difficult to understand why a condition assessment of good has not been given for at least some if not all areas of OMHPDL, and even more difficult to see how a classification of fairly poor could be applied on any part of the site. While we do not have sufficient detailed information to make give a firmer estimate for the unit value of OMHPDL on this site, taking account of the probable underestimate of the extent of OMHPDL we are of the opinion that this underestimate of condition has led to the unit score for this habitat type has being underestimated by several hundred units.

Mixed scrub habitat type: Appendix 12.3 classifies all mixed scrub areas across the site as being in fairly poor condition. The condition assessment criteria for good condition this habitat type as set out Defra Metric Technical Supplement are as follows:

- 1. There are at least three woody species, with no one species comprising more than 75% of the cover (except common juniper, sea buckthorn or box, which can be 100% cover).*
- 2. There is a good age range – a mixture of seedlings, saplings, young shrubs and mature shrubs.*
- 3. Pernicious weeds and invasive species make up less than 5% of the ground cover.*
- 4. The scrub has a well-developed edge with un-grazed tall herbs.*
- 5. There are many clearings and glades within the scrub.*

We can see no evidence in the PEIR or Appendix 12.1 to justify why scrub habitat condition deviates from these criteria sufficiently to justify a fairly poor condition score, and would ask for further clarification. A reclassification of this habitat type to moderate condition, which would appear from the information provided to be more realistic, would lead to a significant increase in the baseline total of 229.65 units.

In addition to these particular habitats, we would recommend a review of condition scores, referring closely to relevant condition assessment guidance, is made for all medium and high distinctiveness grassland habitats, high distinctiveness woodland habitats, salt marshes and reedbeds. We suspect that condition scores have been significantly underestimated for each of these habitat types.

Baseline Connectivity

The scores given for connectivity in Appendix 12.3 do not appear to make logical sense and do not correspond with relevant Defra guidance. The Defra Metric User Guides states that “*in the beta version of the biodiversity metric 2.0 all High and Very High distinctiveness habitats should be assigned a Medium connectivity multiplier, other habitats a Low connectivity multiplier*”, or alternatively the Defra Metric connectivity tool should be used, which applies only to high and very high distinctiveness habitat. This guidance has not been followed in the connectivity entries in Appendix 12.3 and therefore this section should be amended accordingly.

Baseline Strategic Significance

We note that all habitat parcels have been scored as “*Area/compensation not in local strategy/ no local strategy*” in the strategic significance column. Kent Nature Partnership is currently devising criteria for using this multiplier across the county, and we would recommend consultation with the KNP in order to conform to emerging local practice. Much of the site is located within the Thameside Green Corridors Biodiversity

Opportunity Area and would therefore likely justify higher strategic significance scores for some habitat types that correspond to relevant Biodiversity Opportunity Area targets.

Onsite Compensation

Given that there is limited detail about onsite compensation measures we are unable to make detailed comments in this respect. However given our preceding comments on the baseline metric calculations we are concerned that the value of onsite habitat enhancement has been significantly over-estimated owing to underestimates of baseline condition.

For instance we have already noted that the areas of grassland in Botany Marsh east and west should be classified as Floodplain Wetland Mosaic rather than modified grassland. We note that Appendix 12.3 details restoration of 1.65ha of modified grassland to Floodplain Wetland Mosaic, presumably in Botany Marsh east (LWS), delivering 10.42 units. A correct baseline habitat and condition classification would reduce the biodiversity net gain from this habitat enhancement measure to a fraction of the value stated in Appendix 12.3.

More specifically we are concerned that little attention has been given to enhancing and creating habitats to support the existing nationally important assemblage of terrestrial invertebrates. We would recommend that specific attention is given to restoring suitable areas of OMHPDL for invertebrates in the retained areas of habitat in Broadness Marsh.

We are also sceptical about the feasibility of achieving some of the condition scores outlined in the habitat enhancement section of Appendix 12.3. In the case of the retained section of Floodplain Wetland Mosaic on Botany Marsh east, which extends to 1.65 ha, we note that this will be detached from the larger area of functionally connected land that will be lost to development in Botany Marsh West. As noted previously, the loss of such a large section of Floodplain Wetland Mosaic is likely to severely impact on the ability of the remaining section of Botany Marsh east (LWS) to sustain the populations of water birds and ditch depended species that characterise the value of this habitat type. Therefore the ability to achieve the target condition score of fairly good as stated in Appendix must be cast into doubt.

Similarly, in the case of salt marsh habitat where habitat enhancement and creation are proposed we question the feasibility of achieving a fairly good target condition score. The areas of saltmarsh in question are small, narrow and disconnected from larger areas of saltmarsh further downstream, therefore we are doubtful that the relevant condition criteria set out in the Defra Metric Intertidal Habitat Technical Guidance for Intertidal Habitats will be met. We would recommend that the both of these target condition criteria are reviewed, and should be amended or accompanied by detailed justification as appropriate.

Offsite Habitat Compensation

There is very little information about offsite compensation other than the statement in paragraph 12.151 of the PEIR that *“the Applicant is committed to the funding and delivery of an offsite compensation scheme involving habitat creation and enhancement sufficient to deliver the necessary credits to achieve a net gain”*. While in principle we support this commitment, given our comments above we are not convinced that this will be achieved or achievable in practice.

Appendix 12.3 identifies that the development will lead to an estimated onsite biodiversity net loss of 335.2 units or 15.01%. As our comments above demonstrate, it is likely that this is a significant underestimation of total biodiversity loss once relevant guidance for habitat type, distinctiveness and condition are applied and appropriate amendments to the calculation made. Consequently the overall net loss, and therefore the amount of habitat required in compensation, is likely to be at least double (and possibly much more) that stated in Appendix 12.3.

We would further recommend that the following considerations are taken into account in developing an offsite compensation and net gain project:

- There should be adequate compensation for loss of OMHPDL and associated habitats supporting invertebrate communities

- Any off site compensation should be located outside nationally and internationally designated areas where maintaining good condition is an obligation under relevant legislation and are therefore inapplicable as habitat compensation and biodiversity net gain receptor sites
- Metric calculations should exclude any species specific compensation for negative impacts on legislatively protected species
- If (as would seem likely given the constraints on land in the Dartford/Gravesend area) compensation needs to take place at a significant distance from the proposed development site, then metric calculations should be appropriately discounted using the spatial risk multiplier in line with Defra guidance

Site selection and alternatives

The EIA Directive requires that the Environmental Statement should include an assessment of reasonable alternatives studied by the developer and the main reasons for selecting the chosen option. This assessment should also provide a comparison of the environmental effects. In addition, Under the Habitats Regulations 2017, as consideration of alternatives is required if the scheme is likely to have a likely significant effect on a European Site. Chapter Three of the PEIR states that in the absence of a National Policy Statement (NPS) for business or commercial NSIPs, regard is given to the National Networks NPS and the National Planning Policy Framework (NPPF) and relevant local plans. The National Networks NPS states that applicants must comply with the requirements to assess alternatives under the EIA Directive and Habitats regulations.

It is therefore concerning that the assessment of sites in PEIR Chapter 4 and associated assessments in Appendix 4.1 have not been updated since 2014. Kent Wildlife Trust does not believe that the assessment of the Swanscombe site during the site selection process and alternatives test was accurate with regards to the criteria of “land use” and “environmental constraints”.

The Swanscombe site is referred to as a brownfield site with the connotation that this equates to a previously developed site which is devoid of nature. This is not an accurate description of the site and would have been easily ascertained even prior to detailed ecological surveys. In fact, the description in Appendix 4.1 states *“A number of drains, lagoons and other features are also present. Much of the peninsula has re-vegetated naturally but areas of bare ground remain. Parts of the site comprise saltmarshes, although a flood defence embankment protects the site from inundation from the Thames.”* It does not seem that the criteria for classifying brownfield sites were accounted for during the site selection process, as the description provided in Appendix 4.1 clearly identifies this site as open mosaic habitat on previously developed land (see criteria summarised in priority habitats section above).

It also does not appear that the nationally protected Swanscombe Marine Conservation Zone (MCZ) has been accounted for. Whilst it is understood that the original assessment of sites, undertaken pre-2014, predated the Swanscombe MCZ designation in 2019, this new proposal should take account of the most up to date information and be assessed and altered accordingly. As such, Appendix 4.1 should be updated and the suitability of the sites in 2020 should be assessed. The statement “The Swanscombe Peninsula does not contain any international or national wildlife or heritage designations” is no longer true, particularly as the River Thames was, and continues to be, identified for travel to and from central London and Essex.

The assessment of the Swanscombe Peninsula also did not take account of the important location of this site on the River Thames and the likelihood that it would serve as functionally linked land for nearby Special Protection Areas (SPAs) (this has now been confirmed). Functionally linked land is afforded the same protection as European designated sites.

Further, it has come to our attention that there are inconsistencies within Appendix 4.1, particularly relating to the classification of environmental effects. For example, with regards to the environmental constraints:

- North Northamptonshire is assessed as neutral with respect to environmental constraints on the basis of its strong rural character, presence ancient woodland and nature conservation designations in the local area.

- Marston Vale has been assessed as neutral with respect to environmental constraints due to the presence of local nature reserves and the nationally designated Marston Thrift SSSI.
- The M11 corridor appears to be assessed as neutral on the basis of its rural character despite there being no constraining statutory designations.
- Great Leighs racecourse, Essex, is assessed as positive with respect to environment constraints as it is free from environmental constraints and well separated from statutory protected sites.

On the basis of the assessments and justifications referenced above, the assessment that the Swanscombe Peninsula is positive with respect to environmental constraints appears to be totally inconsistent with the assessment of the other sites. Given the presence the nationally designated Swanscombe Marine Conservation Zone and Bakers Hole SSSI within the development footprint, close proximity to West Thurrock Lagoon and Marshes SSSIs and Swanscombe Skull SSSI, functional linkage to the internationally designated Thames Estuary and Marshes SPA and/or Medway Estuary and Marshes SPA and the presence of Botany Marsh, Alkerden Pit and Ebbsfleet Marshes Local Wildlife Sites. The environmental constraints should also have extended to look at the wider impacts of associated transport infrastructure, including Darenth Wood SSSI and a number of ancient woodlands. We ask that this assessment be updated to accurately represent the importance and significance of the Swanscombe Peninsula from an environmental aspect. It does not seem that the constraints at the Swanscombe site were properly assessed in 2014, with even further constraints being present in 2020. At present, the assessment appears to have been retrofitted to suit the already selected Swanscombe site.

Cumulative impacts

Both the EIA Regulations and the Habitats Regulations require an assessment of cumulative impacts of the project. We understand that the list of projects to be assessed in combination is yet to be refined, however it is concerning that the Lower Thames Crossing and Ebbsfleet Central are not included in Appendix 20.1.

Climate

In line with the applicant's claims in paragraph 20.19, the proposed development should achieve net zero carbon emissions at both the construction and operational stage. It is noted that paragraph 20.39 classifies construction impacts to be major adverse and operation effects to be negligible. An analysis of proposed mitigation measures for the construction stage should be undertaken to demonstrate their effectiveness. We would advise that relevant external organisations are engaged in the design team brief where these mitigation measures are confirmed. Whilst we support in principle London Resort's ambition to be carbon neutral we require a detailed report of predicted energy consumption and energy generation on site, including details of any storage of renewable energy generated. It was not possible to locate the Energy Statement referenced in paragraph 20.42 of the PEIR.

This project will have the opportunity to be an industry leader in the delivery of a carbon neutral scheme, including operational transport emissions from visitors.

We hope that our comments prove useful in informing the evolution of this scheme and we are happy to engage with you moving forwards to ensure that biodiversity is meaningfully protected and enhanced. Please do not hesitate to contact us if you wish to discuss our comments in more detail.

Yours faithfully,

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